

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

Claim 1 is amended herein.

New claims 4-6 are added.

In view of the above, it is respectfully submitted that claims 1-6 are currently pending and under consideration in the present application.

II. CLAIM OBJECTIONS

On page 2 of the Office Action, claim 1 is "objected to." Claim 1 is amended herein to overcome the objection.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 1-3 UNDER 35 U.S.C. §102(E) AS BEING ANTICIPATED BY ELLIS (US 5,953,138)

The present invention as recited in claim 1, relates to an optical communication system comprising "an optical gate converting a multiplexed light from the multiplexer into a time division multiplexed signal light having one wavelength which is a different wavelength from the wavelengths of the output lights from the transmitters." Thus, the claimed optical gate can convert a WDM signal into a TDM (time division multiplexed) signal having one wavelength.

Ellis teaches a plurality of optical transmitters (700) outputting different wavelength lights, a multiplexer (740) multiplexing the lights from the transmitters (700), an optical gate which is a non-linear optical loop mirror (TWSLA) (745) performing logical AND processing between a multiplexed light (a first signal (WDM signal)) and a second signal (a control signal), thereby converting into a WDM signal (a third optical signal), and a dispersive element (760) converting the WDM signal (the third optical signal) into signals which are separated in time axis, (see FIGS. 8-9, and column 2, lines 32-48 and column 7, line 29 - column 9, line 12).

Ellis does not teach the features recited in claim 1 of the present invention. For example, Ellis teaches that different wavelength lights contained in the first optical signal (WDM signal) are overlapped in time axis, and the overlapped WDM signal is separated in time axis by the dispersive element (760). Thus, the output signal of the optical gate, which is the non-linear optical loop mirror (TWSLA) (745), is at least a WDM signal, and is not a TDM signal.

Accordingly, the optical gate (745) of Ellis cannot perform converting a WDM signal into a TDM signal having one wavelength like the optical gate recited in claim 1 of the present invention.

It is respectfully submitted that Ellis does not teach the features recited in claim 1.

Claims 2 and 3 depend from claim 1. For at least the reason that claim 1 distinguishes over the cited prior art, it is respectfully submitted that claims 2 and 3 also distinguish over the cited prior art.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. NEW CLAIMS

Similar to claim 1, claim 4 relates to an optical communication system comprising "an optical gate converting a wavelength multiplexed light from the multiplexer into a time division multiplexed signal light which has one wavelength which is a different wavelength from the wavelengths of the output lights from the transmitters."

Claim 5 recites, "the optical gate comprises a first optical coupler including first and second optical paths directionally coupled to each other, a nonlinear optical medium for forming a loop optical path connecting said first and second optical paths, and a second optical coupler including a third optical path directionally coupled to said loop optical path."

Claim 6 recites "converting the wavelength multiplexed light into a time division multiplexed signal light having one wavelength which is a different wavelength from the wavelengths of the output lights from the transmitters."

In view of the above, it is submitted that new claims 4-6 patentably distinguish over the cited prior art.

V. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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